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ABSTRACT

The study of futuristics is an attempt to spot trends, to make predictions, and to plan creatively in order to provide direction for humanity. Originally designed for the gifted student, these reproducible units on futuristics emphasize the use of higher order thinking skills and are appropriate for use in any classroom. Interdisciplinary in content, the units provide a broad view of futuristics. Within this book are two complete units, one created for the upper elementary gifted student and the other for the lower elementary gifted student. Suggestions for adapting the materials to fit other classrooms are included. Several learning modalities are designed into the materials to encourage active student participation. (CW)

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Zephyr



Learning Packets

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FUTURISTICS

A SELF-DIRECTED LEARNING EXPERIENCE
Interdisciplinary – Product Oriented
Grades K – 8

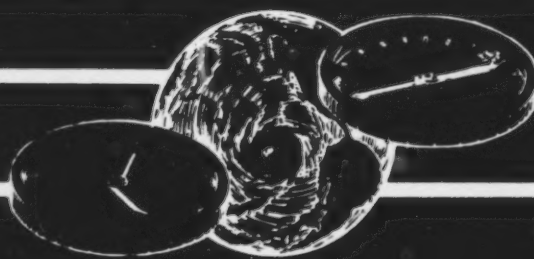
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Zephyr



Learning Packet

FUTURISTICS



**A self-directed unit requiring students to
ANALYZE TRENDS and ESTABLISH CRITICAL ISSUES
and PRIORITIES.**

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FUTURISTICS:

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for grades
K-3 and
4-8, gifted
easily adapted for
regular classroom use

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FUTURISTICS:

by Joey Tanner

**Self-Directed
Study Units
for grades
K-3 and
4-8, gifted
easily adapted for
regular classroom use**

**Interdisciplinary and
Product Oriented
through the use of:**

**Evaluating
Classifying
Comparing
Imagining
Researching
Mapping & Charting
Creating
Reporting
Thinking ... Reacting
Career Exploration**

**ZEPHYR PRESS
TUCSON, ARIZONA**

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THE PREMISE

CHILDREN ARE ACTIVE PARTICIPANTS IN THEIR LEARNING, NOT PASSIVE VESSELS TO BE FILLED. THEY ARE ALWAYS SEEKING AND CHOOSING WHAT THEY WILL LEARN AND WHAT THEY WILL NOT LEARN. THEIR ACTIVE INVOLVEMENT IS CRUCIAL TO LEARNING. CHILDREN TEND TO BECOME PERSONALLY INVOLVED IN PROJECTS THAT APPEAL TO A VARIETY OF MODALITIES . . . READING, WRITING, BUILDING, CREATING, IMAGINING, AND REAL THINKING . . . SO A VARIETY OF EACH IS INCLUDED IN THIS SELF-DIRECTED LEARNING UNIT.

A WORD TO THE TEACHER

FUTURISTICS

Alvin Toffler relates in **THE THIRD WAVE** that most people believe either that "the world as we know it will last forever" or that "doomsday is imminent". Either view, according to Toffler, leads to inertia and/or non-creative action.

Knowledge and action are necessary, most futurists agree, if man is to ride the crest of our social and technological turmoil of change. Even the language is changing with terminology like "nuclear family", "time warp", "electronic cottage", "whole-brain and life-long learning" and "communication revolution" becoming household words. The changes both in language and in custom come and are replaced by another before modern man has adjusted to the first.

The study of Futuristics is an attempt to spot trends, to make predictions, and to plan creatively in order to provide direction for mankind in a time of unprecedented and often confusing change.

**"ONE CAN LEARN THE CAMPAIGNS OF
THE CIVIL WAR WITH DATES, BATTLES
AND CHARACTERS WITHOUT LEARN-
ING ANYTHING ABOUT WHY WARS
ARE FOUGHT BETWEEN FRIENDS OR
WHAT IDEAS CAN BE GENERALIZED TO
OTHER CONFLICT SITUATIONS."**

James Gallagher,
Teaching the Gifted Child, 1974

RATIONALE FOR SELF-DIRECTED LEARNING

Our children's education must be more than the memorization of capitols of the states, the products of countries and the dates and places of past wars. Most teachers and parents would agree that what is also wanted is for children to learn to think for themselves, to organize their own time, to make wise choices, to work independently and to thoughtfully evaluate the results of their study.

OBSTACLES TO INDEPENDENT LEARNING

In spite of the teacher's best efforts, many, if not most, classroom settings are organized in such a way that students are involved in schedules and organizational plans that foster dependence rather than the independence we prefer. Students are told what is to be learned, how long it will take them to learn it, the resources are defined by the teacher and, afterwards, the teacher rather than the student decides whether the learning experience was a satisfactory and valuable one.

A LEARNING ATMOSPHERE

Each time we, as educators, focus on what our objectives are, we need to take a fresh look at our classroom mode of operation and evaluate the effectiveness of the way we teach. Quite naturally, for most of us, our teaching style has more to do with how we were taught than with what recent research has shown about the learning process. Even our good instincts have been overcome by the years of conditioning we have known in our own educational experiences.

Like a breath of fresh air, the recent findings coming from the research on the brain and how it operates are supporting our intuitive knowledge. This research is showing that our brains are receptive to learning only under certain conditions. Our job is to translate that information into a classroom atmosphere that provides:

- challenge
- freedom within structure
- trust and warmth
- opportunities to experience success
- personal involvement in the curricula

A natural transition generally occurs that transforms the former "teacher-lecturer" into a "fellow-learner". As a "fellow-learner" the teacher's role becomes one of a resource person, a facilitator and a classroom manager. In this maturing atmosphere, students gradually come to see themselves as responsible for their own learning and a foundation for self-direction is set.

* * *

At this point, a sometimes unexpected problem arises. We find the student no more ready for their independent learning than we, as teachers, were ready to allow it. This common occurrence is mentioned repeatedly in the literature dealing with programming for the gifted, an area where independent study and research are recommended as a major curricular activity (see **Suggested Reading List**; Maker (1982), Doherty & Evans (1980), and Feldhusen and Treffinger (1980).

FROM PASSIVE LEARNER TO ACTIVE PARTICIPANT (BRIDGING THE GAP)

The **ZEPHYR** self-directed study unit was developed expressly to bridge that gap . . . to transport the student from the position of passive recipient to that of an active participant in his/her own pursuit of knowledge.

Within the defined structure of each unit, the students are given opportunities to:

- make choices
- learn at their own pace
- learn in a manner more closely suited to their own learning style
- expand research skills
- use a variety of modalities
- plan their own time
- develop the skills of creative, critical and evaluative thinking
- experience whole-brain learning

Since responsibility for directing their own learning is so often an unfamiliar situation, the students will need your encouragement at the start. Generally, within six to nine weeks, most students will be well on their way from teacher dependence to self-motivation. (Beginning the venture with only a few choices, then gradually arranging the setting so that there are more and more choices, works best.) As students assume more responsibility, many teachers begin to consider the school library as just another part of the classroom . . . the benefits are many . . . from gaining a personal relationship with the librarian to learning about the enormous resources available, but often unused, in most school libraries.

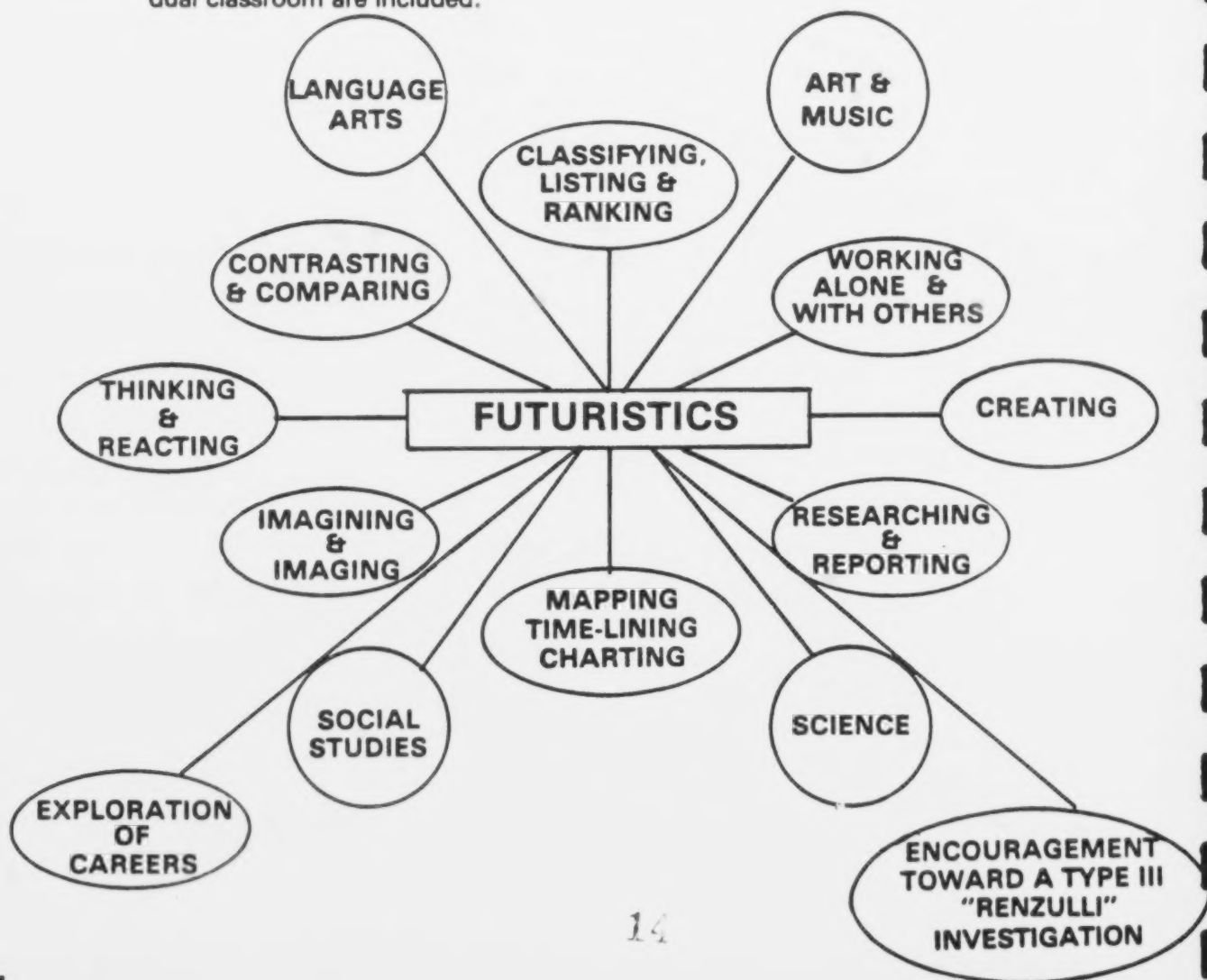
Eventually, a few students will be ready for a true investigative research study of professional quality as suggested by Joseph Renzulli in **The Enrichment Triad Model, A Guide for Developing Programs for the Gifted and Talented**, 1977.

THE FORMAT

Originally developed for the gifted student, these units emphasize the use of the higher level thinking skills . . . and are appropriate for use in any classroom where the goal is to encourage students to become responsible for their own education.

Interdisciplinary in content, the unit envelopes a broad view of the topic by integrating the "basics" into each activity.

Within this book are two complete units, one created for the upper elementary gifted student and the other for the lower elementary gifted student. Suggestions for adaptations for adjusting either of the levels to fit any individual classroom are included.



SUGGESTED READINGS

SELF-DIRECTED STUDY

"Bells, Groups and Independent Study", Psychology and Education of the Gifted. Barbe, W. and Renzulli, J. New York, 1975. Irvington Publishers.

Creative Questioning and Sensitive Listening Techniques. Carin, A. and Sund, R. Columbus, Ohio, 1978. Charles Merrill Publishing Company.

Creative Thinking and Problem Solving in Gifted Education. Feldhusen and Treffinger. Dubuque, Iowa, 1980. Kendall-Hunt Publishing.

Curriculum Development for the Gifted. Maker, C.J. Rockville, Maryland, 1982. Aspen Systems Corporation.

Enrichment Triad Model: A Guide for Developing Defensible Programs for the Gifted and Talented. Renzulli, J. Mansfield, Connecticut, 1977. Creative Learning Press.

Growing Up Gifted. Clark, B. Columbus, Ohio, 1978. Charles Merrill Publishing Company.

Open to Change: Options for Teaching Self-Directed Learners. Malehorn, H. Palo Alto, California, 1978. Scott Foresman Company.

Self Concept and School Achievement. Purkey. Englewood Cliffs, N.J., 1970. Prentice-Hall, Inc.

Self Starter Kit for Independent Learning. Doherty and Evans. Austin, Texas, 1980. Special Education Associates.

Teaching the Gifted Child. Gallagher, J. Boston, Massachusetts, 1975. Allyn and Bacon

INTEREST DEVELOPMENT CENTER

FUTURISTICS

THE PURPOSE OF THE INTEREST DEVELOPMENT CENTER IS TO STIMULATE INTEREST IN THE TOPIC AREA. THE STUDENT NEEDS TIME FOR BROWSING AND INVESTIGATION FOR MAXIMUM BENEFIT.

(Beginning ideas you and your students will think of more let parents and other teachers know about the Center and it will often grow without effort.)

BOOKS, FILMSTRIPS, FILM LOOPS (suggested topics)

WORLD HUNGER

POPULATION EXPLOSION

THE BRAIN AND HOW IT WORKS (These should be very recent)

FUTURISTICS

FORECASTING

COMPUTERS

WHOLISTIC MEDICINE

MEDICAL FRONTIERS & DISCOVERIES

BIONIC MEDICINE

OIL PRODUCTION

EXTRASENSORY PERCEPTION AND RELATED SUBJECTS

ROBOTS

GENETIC ENGINEERING

SPACE COLONIZATION

ALTERNATE SOURCES OF POWER

ARCHITECTURE OF THE FUTURE

I HEAR AND I FORGET

I SEE AND I REMEMBER

I DO AND I UNDERSTAND

(source unknown)

GETTING STARTED

- 1. Select a topic as an extension of a regular curricular subject (particularly when your class seems to crave more) . . . or . . . select a topic to pursue that is of particular interest and may not be part of the curricula. To zero in on special interests, administer an interest survey to each student.**
- 2. Copy the unit for each student. When using these units for the entire class you may want to expand or delete activities for individual students.**
- 3. Set up a center in the classroom that encourages exploration in the subject field. You'll want to include a wide variety of materials. Be creative, the purpose of the center is to excite the student in this subject area so begin with lots of "hands on" materials allow for ample browsing time and encourage the student to investigate and become absorbed at the level of a true professional.**
- 4. With the students, go over each activity in the unit, discussing and answering any questions. The teacher is an integral key in successful implementation. Because most children are already well-versed in the "One Right Answer Game", they will need encouragement to branch out into many of the open-ended activities in the packets.**

5. Set the stage . . . plan to conference as needed
. . . . provide resources as needed then
get out of the way and let your students learn.

6. Give as much time as each student needs to complete each activity in the unit. The entire package might take from five to ten weeks or longer.

7. As each activity is completed and evaluated, initial the symbol located near each activity number. You will want to evaluate on the basis of what response is appropriate for that student.

8. When a student shows an extreme interest in the topic, the completion of this unit might be only the beginning. This student may well be ready for further study and research and needs only the resources, guidance and freedom to pursue his/her well-planned project.

In preparation for further research, the student will need to decide:

WHAT WILL THE STUDY BE? (what will be investigated and produced)

WHERE WILL BACKGROUND INFORMATION BE FOUND? (i.e., speakers, interviews, books, films, microfiche, documents, etc.)

WHAT, EXACTLY, WILL BE THE FORM OF THE PRODUCT? (a model, a manuscript, or . . .)

WHO MIGHT BE INTERESTED IN THE PRODUCT? (professionals in the field, publishers, organizations, etc.)

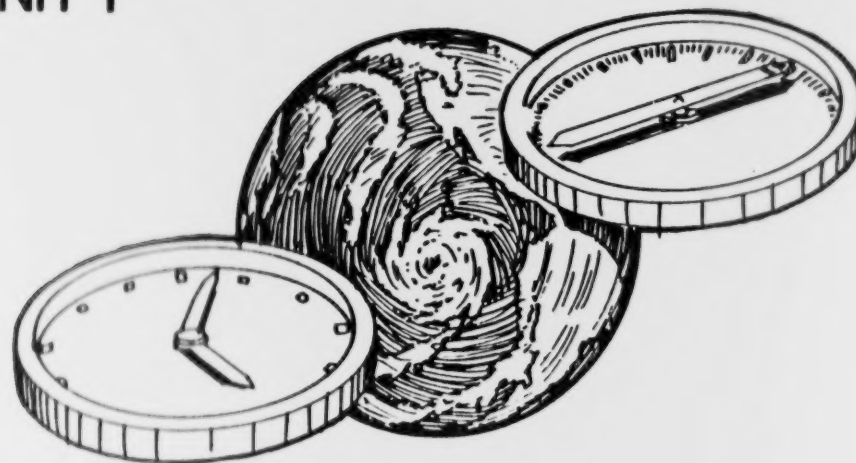
WHAT IS NEEDED TO BEGIN? (specific plans, resources, deadlines . . .)

AGAIN . . . STEP BACK . . . PROVIDE GUIDANCE . . .

and LET HIM/HER GO!

FUTURISTICS

UNIT I



Name _____

Date _____

The following pages are to be reproduced for use in your classroom. You may want to copy directly from this book or cut the pages out first... then keep them in a folder to use another year.

TOMORROW'S WORLD 1

Imagine it is suddenly 20 years in the future

Close your eyes and see yourself

Notice the colors sounds shapes

Are you alone or with others ?

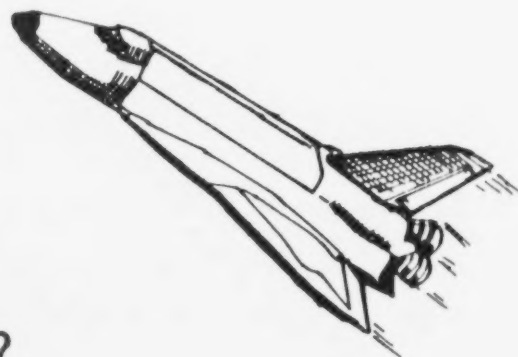
How old are you?

Where do you live?

Where do other people live?

How do they travel?

What work do computers do for you?



Spend time alone thinking about this

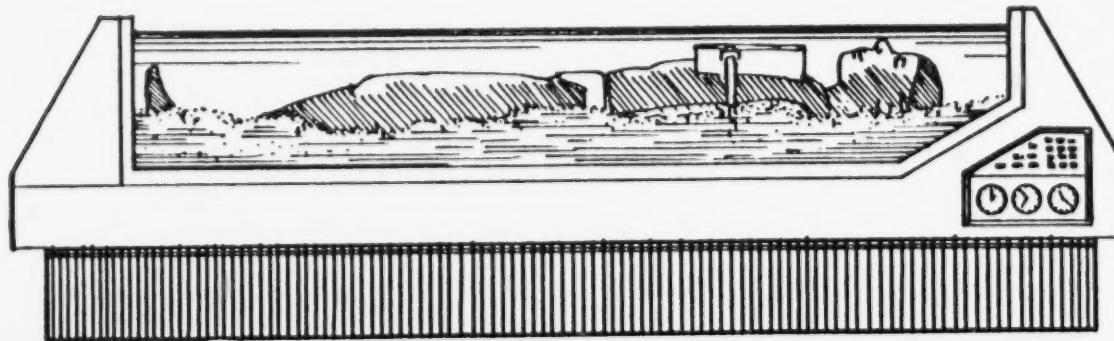
then draw a picture of what you saw.

Describe it all to a friend.

MAKING PREDICTIONS 2

Make a list of your predictions for the future of the universe.
What changes will there be? What will be different?

1. _____
2. _____
3. _____
4. _____
5. _____





INTERVIEW AN EXPERT 3

Talk to someone who has lived for about 10 times longer than you have.

Ask about changes in the world during their lifetime.

Prepare 5 questions to ask.

Then find out this person's ideas of the future. What will be the same? What will be different?

Same

Different

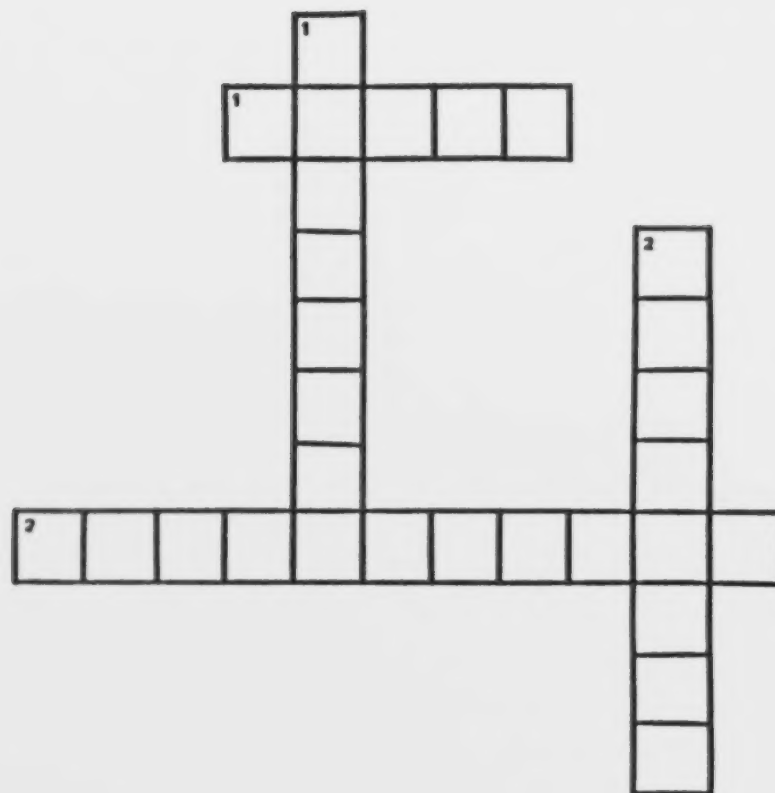
A SPECIAL VOCABULARY 4

Across

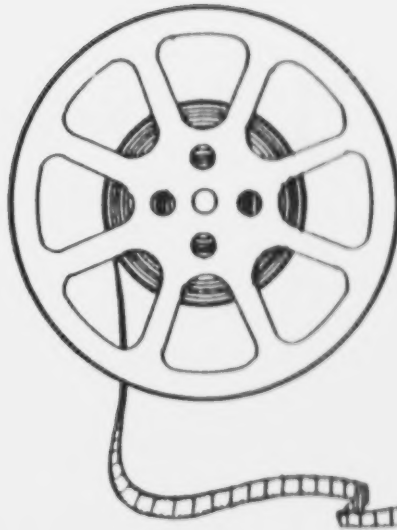
1. a man-like
mechanical
being
2. the study of
possible futures
of human
societies

Down

1. an electronic
machine that
stores information
and makes
calculations
2. a statement
about a future
possibility



ON FILM



Arrange for your class to watch a film about the future. Have your class list the "good" news and the "not-so-good" news. Rank each list.



Here are some film suggestions.

WASTE: RECYCLING THE WORLD EMC/Berkley 22 min.

ALONE IN THE MIDST OF THE LAND NBC 27 min.

INTRODUCTION TO FEEDBACK IBM/Modern Talking Pictures 10 min.

INCREDIBLE MACHINE Bell Telephone/Modern Talking Pictures 14 min.

TOMORROW TODAY Contemporary/McGraw Hill 30 min.

ART, CRAFT, BUILDING

Build a solar cooker

OR

For many years man has predicted the future in different ways. Find out about as many as you can. Make a booklet showing them.

OR

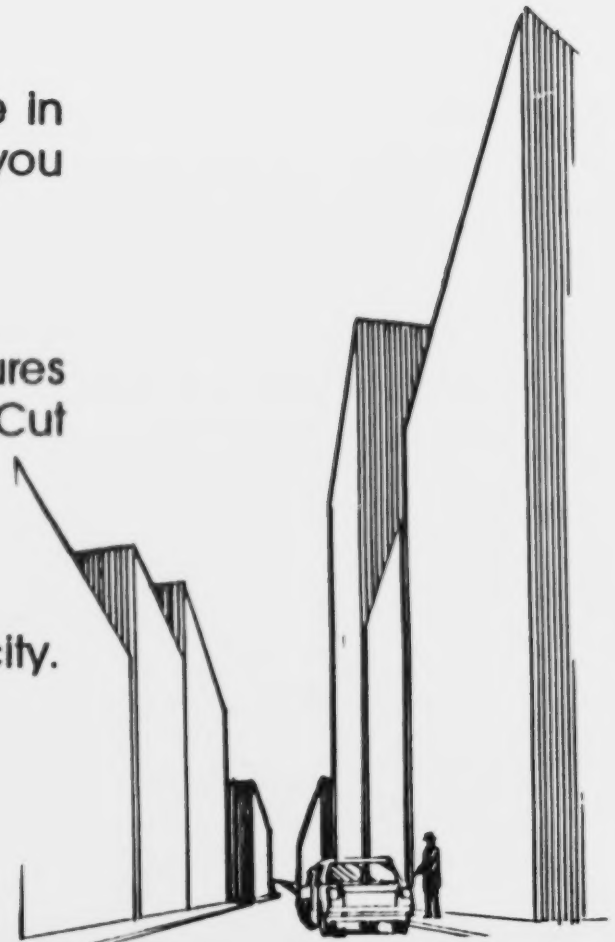
Look in magazines and newspapers. Find pictures of items invented no more than 10 years ago. Cut them out and make a collage.

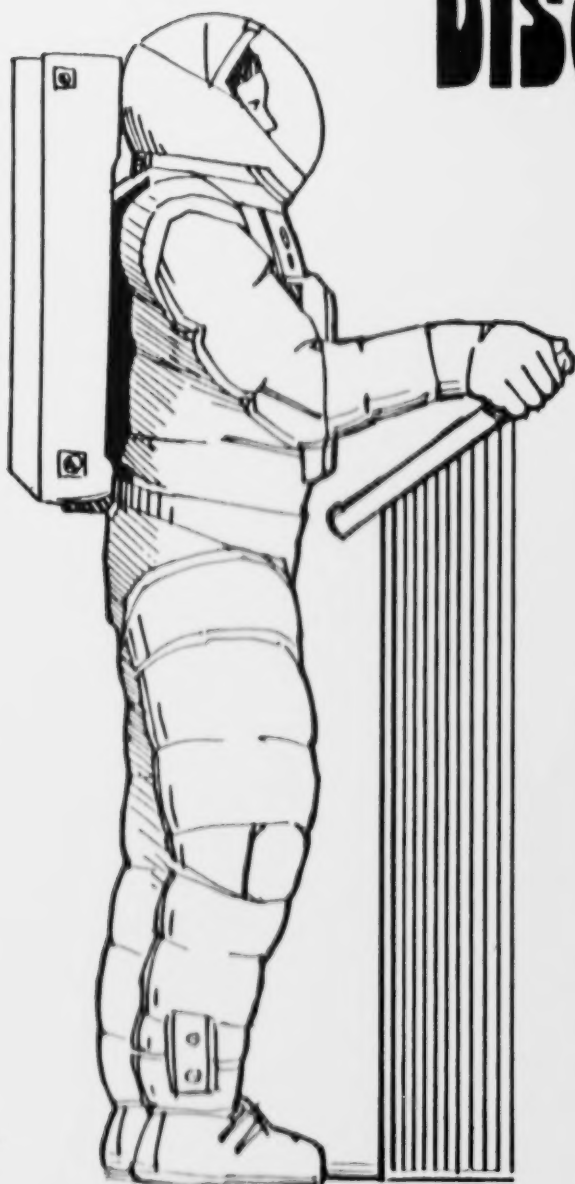
OR

Create a picture or a model of a future city.

OR

Design a "household" robot.





DISCUSSING THE FUTURE 7

WITH AN EXPERT

Interview and tape

OR

Arrange for a speaker for
your class.

- ___ a computer specialist
- ___ a social psychologist
- ___ a biofeedback practitioner
- ___ a biomedical engineer
- ___ a molecular biologist
- ___ an energy expert

(your choice)



MAKING FORECASTS 8

Each person thinks about the future in different ways. What do you think about the following forecasts?

	I agree	I do not agree
--	------------	----------------------

People will learn to travel through time.	_____	_____
---	-------	-------

People will live on the moon.	_____	_____
-------------------------------	-------	-------

People will no longer use fossil fuel.	_____	_____
--	-------	-------

There will be no hunger on the planet.	_____	_____
--	-------	-------

It will be illegal to have more than one child.	_____	_____
---	-------	-------

Computers will be more intelligent than people.	_____	_____
---	-------	-------

People will be able to communicate by transferring thoughts.	_____	_____
--	-------	-------

People will have the ability to be totally bionic.	_____	_____
--	-------	-------

BACK TO BASICS

In the year 2000

Imagine that you are a teacher in a school of the future.

Think about what your students need to know.

What will the school look like?

What classroom materials will be needed?

Show this new education by

- ☐ painting a mural
- ☐ writing a news article.
- ☐ reporting to your class
- ☐ _____

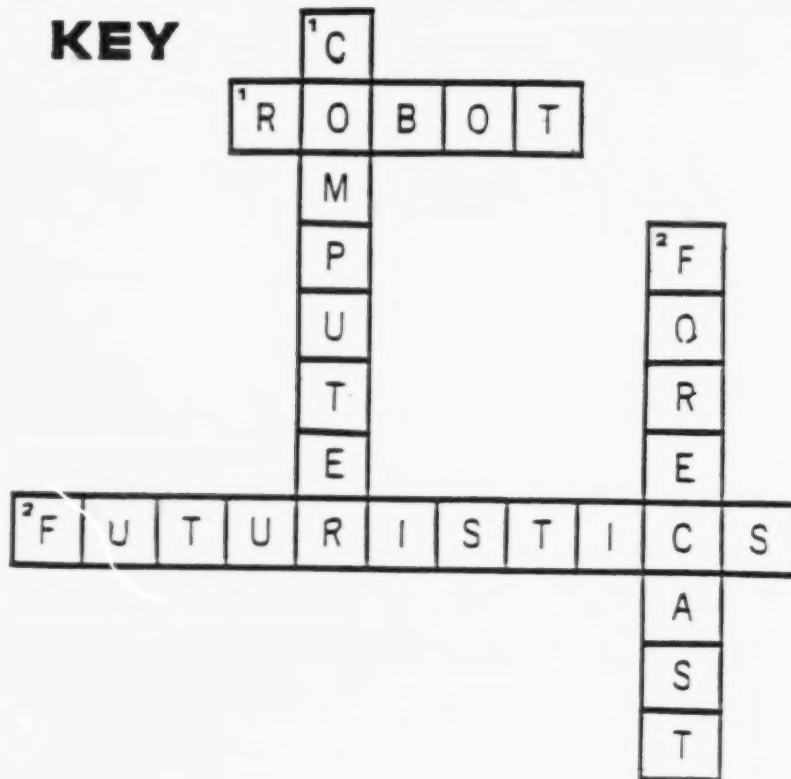
(your choice)



FUTURISTICS

A SPECIAL VOCABULARY

KEY



SUGGESTIONS FOR ADAPTING THE UNIT TO YOUR PARTICULAR TEACHING-LEARNING SITUATION

1. Require fewer, or more, research sources.
2. Assign more of the activities to small groups instead of to individual students.
3. Give fewer or more choices.
4. Delete some activities altogether.
5. Arrange the unit to be a class project with students choosing different parts to complete.
6. Add some activities of your own.

FUTURISTICS

UNIT II



Name _____

Date _____

39

The following pages are to be reproduced for use in your classroom. You may want to copy directly from this book or cut the pages out first... then keep them in a folder to use another year.

TOMORROW'S WORLD 1

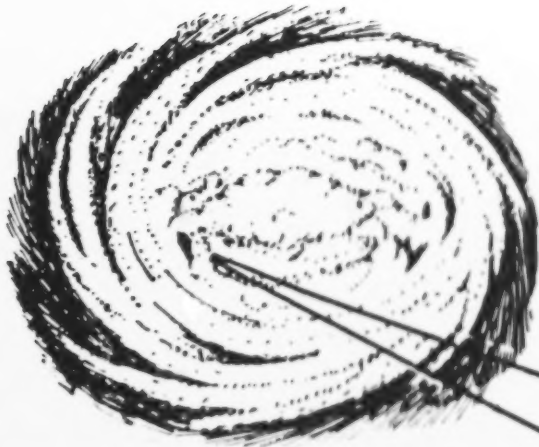
"Much that now strikes us as incomprehensible would be far less so if we took a fresh look at the racing rate of change that makes reality seem sometimes, like a kaleidoscope run wild. For the acceleration of change does not merely buffet industries or nations. It is a concrete force that reaches deep into our personal lives, compels us to act out new roles, and confronts us with the danger of a new and powerfully upsetting psychological disease. This new disease can be called "future shock" and a knowledge of its sources and symptoms help explain many things that otherwise defy rational analysis."

Alvin Toffler, Future Shock, 1970

"Other generations believed that they had the luxury of preparing their children to live in a society similar to their own. Ours is the first generation to have achieved the Socratic wisdom of knowing that we do not know the world in which our children will live."

Foundations of Futureology In Education

A GENERAL OVERVIEW 2

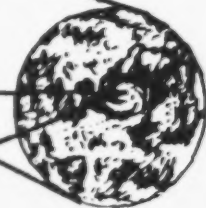
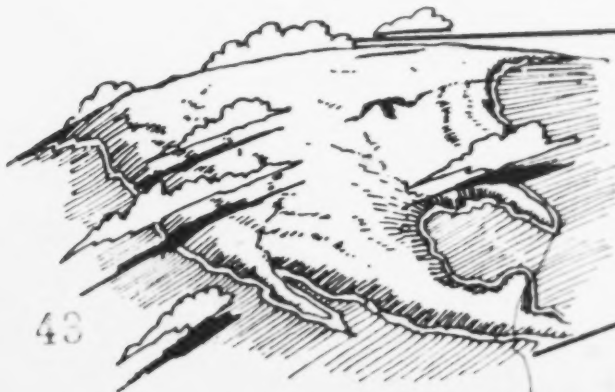


Make a list of your predictions for the future of the universe.

Then make a timeline of events of your life from birth, predicting events for your future. Plug in the first list.

List at least five causes for future concern on our planet. Respond to the impact of population on these concerns.

Create a time line showing changes in the lives of teachers or doctors or children or _____ (your choice) in the last 50 years.



Locate at least two definitions of "Futuristic"

THE HUMAN MIND 3



Some people say that the ability of the human brain is limitless.

Find out about the Lozonov Method, Suggestopedia, or the use of biofeedback in learning (write to Brain/Mind Bulletin P.O. Box 42211, Los Angeles, CA 90042; and Project Outer

Limits, Box 6293, University, Alabama 35486; and see NO LIMITS TO LEARNING: BRIDGING THE HUMAN GAP by Botkin, Elmandjra, and Mallitza).

React to the statement by the early American author, William James:

"Our normal waking consciousness, rational consciousness as we call it, is but one special type of consciousness, while all about it, parted from it by the filmiest of screens, there lie potential forms of consciousness entirely different. We may go through life without suspecting their existence, but apply the requisite stimulus and at a touch they are there in all their completeness...

"No account of the universe in its totality can be final that leaves these other forms of consciousness quite disregarded. How to regard them is the question, for they are so discontinuous with ordinary consciousness. Yet they may determine attitudes, though they cannot furnish formulas, and may open a region through which they fail to give a map. At any rate, they forbid a premature closing of our accounts with reality."

Evaluate and report your findings to your class.

READING THE FUTURE 4

Choose one:

Demonstrate Joseph Martino's two types of forecasting methods (use specific examples).

Robert Bundy, a pioneer in future-oriented education, set specific standards for judging the quality of forecasts. Demonstrate the standards with examples by making a

- ☐ Chart
- ☐ Booklet
- ☐ _____

Research the differences in forecasting and predictions. Find as many as you can in news and magazine articles. Display them in a way that will reach others.



MORE READING THE FUTURE 5

Find out about

Anomaly

Delphi Forecasting

Cross — Impact Analysis

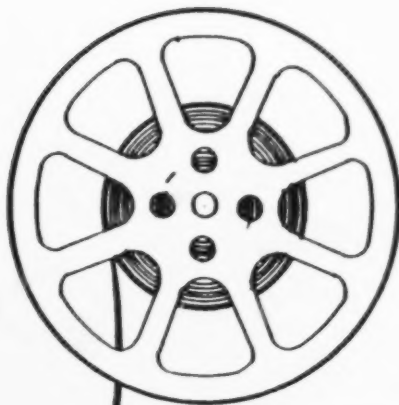
Future's Wheel

Brainstorming

By yourself or with others choose one to demonstrate to your class.

.....

ON FILM 6



Arrange for a viewing of a film such as "FUTURE SHOCK" or "WORLD OF THE FUTURE: Crisis in the 800th Lifetime" (or send for "Futures on Films" by David C. Miller, University of California Extension Media Center, 2223 Fulton Street, Berkeley, CA 94720). List the main concerns of the film. Rank them in the order of your concern.



INTERVIEW AN EXPERT 7

Interview someone who has lived for at least six times your lifetime. Prepare ten questions to determine changes this person has seen and felt. Find out this person's views of the future.

..... CONTRASTING VIEWS AND SOLUTIONS 8

Approximately $\frac{1}{4}$ of the world's population is starving or seriously malnourished.

Research at least three organized solutions now in operation.

What rationale is used for each type of solution? Discuss the pros and cons of each.

OR

Research Robert Theobald's view of the future . . . contrast this with the views of Kahn, Bell and Toffler.

51

ART, CRAFT, BUILDING 9

Research ways throughout history that people have tried to tell the future.
Share your findings.

- ☐ a film strip
- ☐ a booklet
- ☐ _____

OR

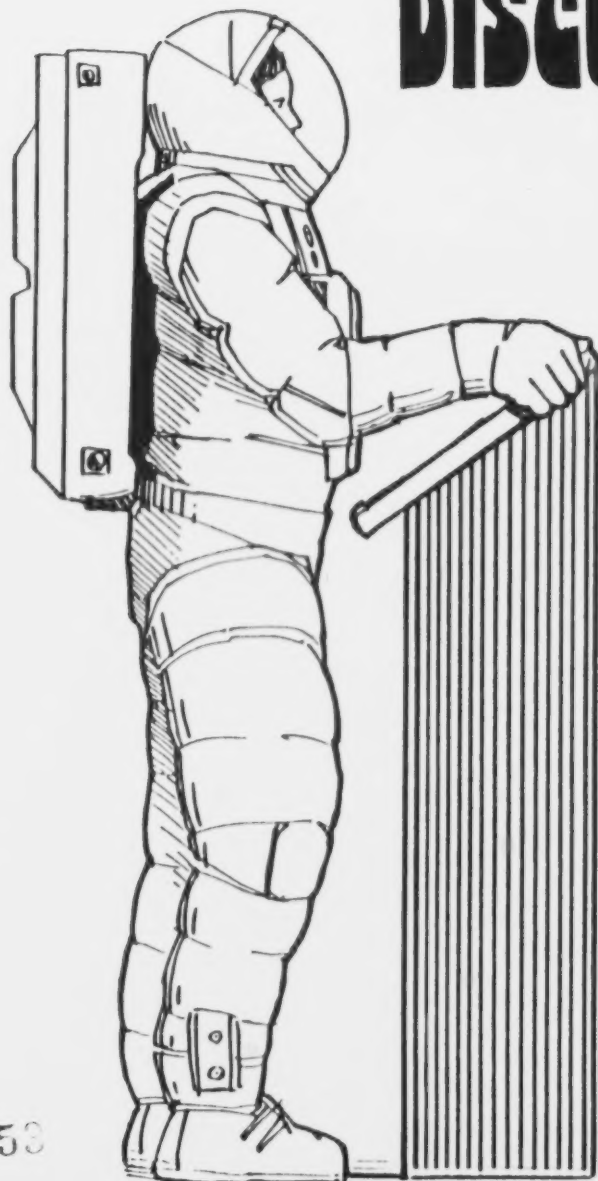
Locate pictures in magazines and newspapers. Make a collage of items that were invented since your birth. Circle those as recent as the last five years.

OR

Create a model of a home entertainment unit of the future.

OR

Organize an illustrated time-line showing the agricultural, industrial and communication revolutions.



DISCUSSING THE FUTURE 10

WITH AN EXPERT

Interview and tape

OR

Arrange for a speaker for your class

- _____ a computer specialist
- _____ a social psychologist
- _____ a biofeedback practitioner
- _____ a biomedical engineer
- _____ a molecular biologist
- _____ an energy expert
- _____ (your choice)

In the year 2000

BACK TO BASICS 11

Imagine that you are responsible for planning the education of the children of your planet. Put together a catalog outlining the basic required courses and the optional courses.

OR

Imagine that you are responsible for training teachers for the school of the future. Plan a teacher training program. Outline it in a catalog or pamphlet.

.....

CHOOSE A PROBLEM 12

Select a potential futuristic problem. Plan at least five questions such as:

"In what year do you predict this might occur?"

"What would be the problems caused by this occurrence?"

Survey at least 15 persons.

Graph your results.



FIND OUT 13

by yourself or with others

How many persons can the earth support?

What is the difference between "investment aid" and "commodity aid."

What "future" problems need a global solution?

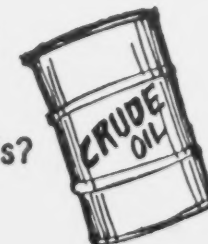


Relate the term "a Faustian bargain" to a solution of a "Future's" problem.



How long it takes to produce fossil fuel?
and

How long it takes to produce a fossil fuel crisis?



2020 A.D. 14

Write a news article about a new pill which stops aging. (Include the pros and cons.)

OR

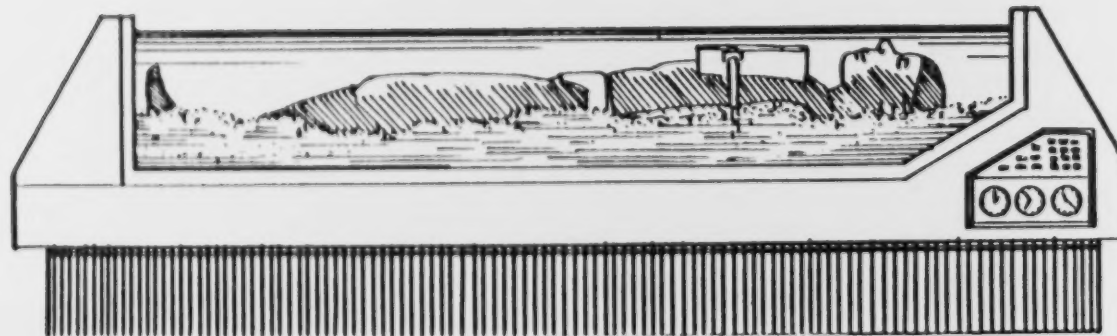
Write a journal for two weeks telling what you do with your extra time since your occupation requires only 15 hours weekly.

OR

Dramatize a city council meeting.

OR

Write a personalized account of your involvement with genetic engineering or cryogenic suspended animation.



SCIENCE FICTION ⌚ 15

Put together a presentation or an exhibit featuring "realistic" SCIENCE FICTION from your library. Include books, filmstrips, magazines, etc.

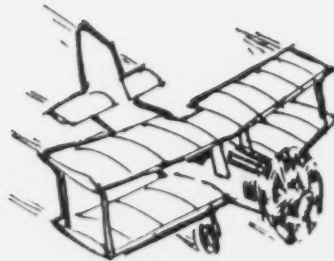
OR

Create a game introducing participants to some of the well-known authors of Science Fiction.

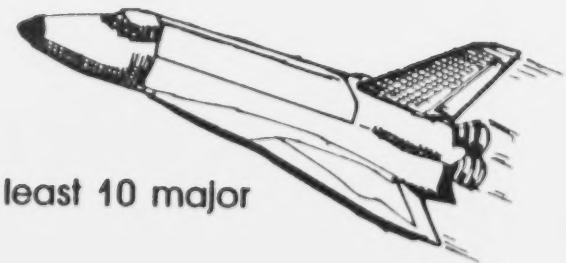
.....

THE PAST DIRECTS THE FUTURE ⌚ 16

Create a "Book of Facts" — new in this decade.



OR



Prepare a filmstrip or chart showing at least 10 major discoveries of the last 50 years.

MAKING PREDICTIONS ⌚ 17

Create a list of at least 30 predictions for the next 50 years.

Survey your friends asking them to respond

Not possible

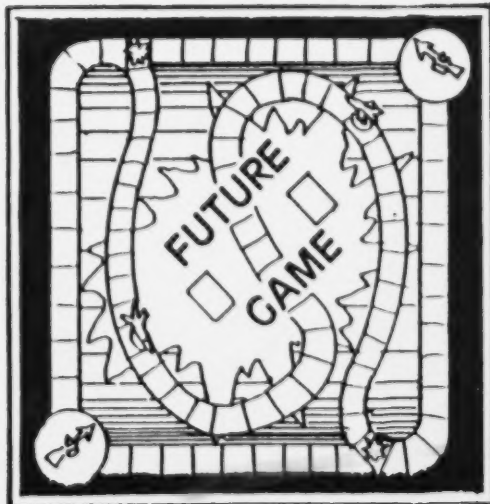
Possible

Probable

Graph your results.

.....

TREND FORECAST PREDICT ⌚ 18



Create a puzzle or game using at least 20 terms common in the study of futuristics.

COMPARE AND CONTRAST 19

The major problems facing your city government:



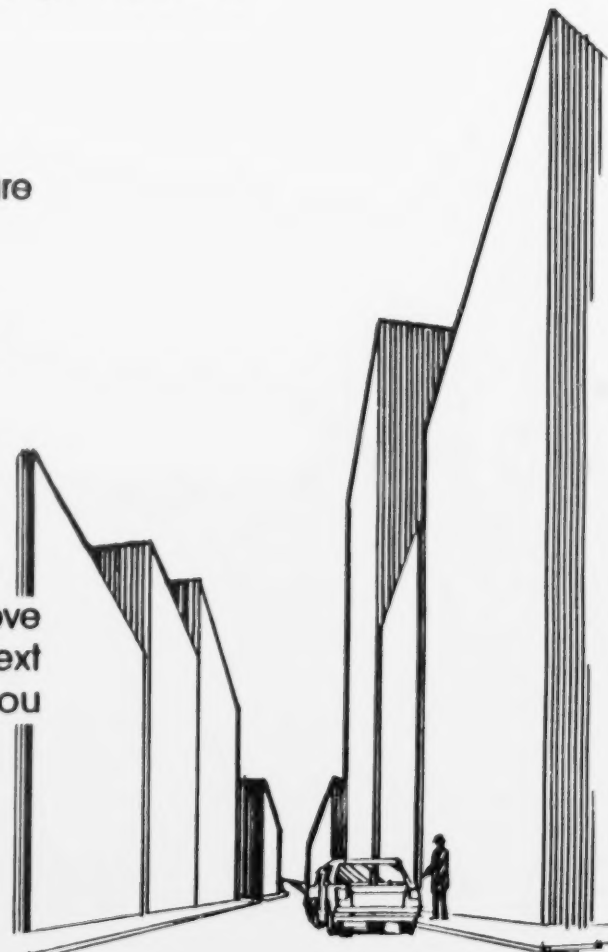
50 years ago

NOW

50 years In the future

Chart or diagram your conclusions.

What inventions, if any, would improve the quality of life in your city in the next 50 years? What changes could you make in your lifestyle?



VIEWS OF THE FUTURE ⌚ 20



Complete a paragraph of at least 3 descriptive sentences using these beginnings.

The future is a giant computer ...

The future is an active volcano ...

The future is a tidal wave

The future is a well rehearsed play

Which view of the future do you wish for?

FUTURISTICS

ADULT BIBLIOGRAPHY

Asimov, Isaac

CHANGE! SEVENTY-ONE GLIMPSES OF THE FUTURE, a collection of short essays offering insights into what the world of tomorrow might be like.

Boulding, Kenneth

THE MEANING OF THE TWENTIETH CENTURY, presents two actions for civilization.

Berkin, James; Elmendorf, Mehal
and Melillo, Mircea

NO LIMITS TO LEARNING: BRIDGING THE HUMAN GAP (A Report to the Club of Rome), a hopeful look at humanity.

Chase, Stuart

THE MOST PROBABLE WORLD, major problems and possibilities.

Gabel, Messard

HO-PING: FOOD FOR EVERYONE, strategies for eliminating hunger on the planet.

Torffler, Alvin

FUTURE SHOCK, documentation of accelerating change and its impact on society.

THE FUTURISTS, a compilation of the writings on the future from 1962 to 1972.

JUVENILE

Asimov, Isaac

EARTH, OUR CROWDED SPACESHIP, the impact of the population explosion and technological advances.

Berger, Melvin

BIONICS, estimate of artificial limbs, organs, senses, intelligence and robots.

Berger, Melvin

ROBOTS IN FACT AND FICTION, summarizes most well-known stories of robots and gives the history of robots.

Bova, Ben

THROUGH EYES OF WONDER, the intensity of science and science fiction.

Bova, Ben

THE SEEDS OF TOMORROW, a hopeful look at the future through science and technology.

Branley, Franklin M.

ENERGY FOR THE 21ST CENTURY, a positive energy forecast.

Coomes, Charles

COAL IN THE ENERGY CRISIS, a history of coal, its present and future.

Engelbre, Sylvia and Roberson, Rick

TOOLS FOR CHANGE: NEW KNOWLEDGE ABOUT GENES, pro's and con's of genetic engineering.

Hayes Usborne Publishing Co.

THE WORLD OF THE FUTURE SERIES, a multitude of facts plus exciting possibilities presented in an easy-to-read format.

ROBOTS - science and medicine into the 21st century.

FUTURE CITIES - home and living into the 21st century.

STAR TRAVEL - transport and technology into the 21st century.

THE FUTURE - a trip in time to the year 2000 and beyond.

Knight, David

COLONIES IN ORBIT: THE COMING AGE OF HUMAN SETTLEMENTS IN SPACE, early ideas and future possibilities of space colonization.

Skurzynski, Gloria

BIONIC PARTS FOR PEOPLE, the real story of artificial organs and replacement parts.

Smith, Norman F.

SUN POWER, new ways of putting "sun-power" to work.

Watson, Jane Warner

LIVING TOGETHER IN TOMORROW'S WORLD, a research based preview of the future of community living, transportation and communication.

PERIODICALS

Brain/Mind Bulletin

P.O. Box 42211

Los Angeles, CA 90042

Futurist

4916 St. Elmo Ave

Washington D.C. 20014

Leading Edge

P.O. Box 42247

Los Angeles, CA 90042

Omi

909 Third Ave.

New York, NY 10022

Science 80

P.O. Box 10790

Des Moines, Iowa 50340





Exploring The Arts

an opportunity to integrate art experiences
within an academic content area.

by
Stephany Mack

While each component . . . the self-directed learning unit and Exploring the Arts . . . is a complete and valid learning experience in itself, together they provide a more comprehensive and lasting educational experience for the learner.



1. GRAPHIC ART

Supplying the world population with enough energy is an ever-increasing problem in today's society. Unless major technological advancements are made, the energy problem will continue to escalate.

INVENT a new energy product.

DESIGN a program to market your new found energy product.

TO BEGIN: Choose a product already on the market.
ex. Exxon Petroleum Products.

ANALYZE the graphic art and the advertising style for the product.

What visual symbols identify this product? How is color used to attract attention to the product? Why is the visual symbol easy to remember? How does the symbol identify the product? What information does the symbol imply?

Answer these questions in a written report.

VOCABULARY

graphic art refers to art that is created for
commercial use.

logo is a term that means "visual symbol".

rough art is the preliminary art.

camera ready art is the art that has been prepared
for the printer "ready" for production

.....

CREATE your product. Design the logo to identify your product. Look through magazines for interesting types of print that you might use . . . or design your own letters.

Consider: visual impact
visual memory
use of product
availability of product
cost of product
consumer

PRODUCE a "camera ready" piece of art work 6" x 6".
Use paint, marking pens, pencil or cut paper
to make your logo.

2. ARCHITECTURE

LIST the characteristics you see.

Consider: size
height landscape
width roof line
materials used function
entrances and exits similarities and differences
distance from street in architecture

DESIGN a home to meet the demands of a future society. You decide what those needs will be and design your home accordingly.

REMEMBER: Consider the characteristics above and any more you can think of

DRAW a front and back view of your home. Include the landscape.

Draw your floor plan and label it clearly.

HINT – Use the “Home” section of your newspaper to help you with your drawings

RESEARCH

Frank Lloyd Wright is a well known architect.
Read about the life and work of Frank Lloyd Wright.
List and describe 3 of his famous structures.